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Date	October 14, 2004	Phone	Fax
To	Examiner Alan D. Diamond, Group Art Unit 1753, Mail Stop Amendment, USPTO		703-872-9306
From	Frank M. Gasparo	+1 212 891 3942	+1 212 310 1642
Client/Matter No.			
Re	Application no. 09/682,363		
Pages (w/cover)	64		

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	09/682,363
	Filing Date	8/24/2001
	First Named Inventor	Anthony C. Zuppers
	Art Unit	1753
	Examiner Name	Alan D. Diamond
	Attorney Docket Number	22122878-6
Total Number of Pages In This Submission		

ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation <input type="checkbox"/> Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): PTO/SB/08A and B forms.
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22122878-6

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**RECEIVED
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In re Application of: Anthony C. Zuppero et al. Art Unit: 1753

OCT 14 2004

Serial No.: 09/682,363

Examiner: Diamond, Alan D.

Filing Date: August 24, 2001

Date: October 14, 2004

TITLE: **PULSED ELECTRON JUMP GENERATOR**

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT**S I R:**

1. In accordance with the duty of disclosure under 37 C.F.R. § 1.56 and in conformance with the procedures of 37 C.F.R. §§ 1.97 and 1.98 and M.P.E.P. § 609, attorneys for Applicants hereby bring the following references, which are listed on the attached modified PTO Form 1449 to the attention of the Examiner. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.
2. Applicants respectfully request that the following co-owned patents and co-pending applications be considered and made of record in the present application:

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Amelia Finker

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US Patent Nos. 6,114,620 (cited on PTO-892 by the Examiner); 6,218,608 (cited on PTO-892 by the Examiner); 6,222,116 (cited on PTO-892 by the Examiner); 6,268,560 (cited on PTO-892 by the Examiner); 6,327,859 (cited on PTO-892 by the Examiner); 6,700,056 (cited on PTO-892 by the Examiner); 6,678,305; 6,649,823 (cited on PTO-892 by the Examiner); and

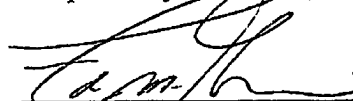
US Patent Application Nos. 10/759,341; 09/631,463; 10/052,004 (US-2003/0166307, cited on form PTO-892 by the Examiner); 10/625,801; 10/185,086 (US-2003/0000570, cited on PTO-892 by the Examiner).

The references cited in each of those patents and applications are listed on Form 1449 accompanying this information disclosure statement.

3. Copies of the references listed on the modified PTO form 1449 will follow under a separate cover by first class mail due to their volume.

4. No fee is deemed necessary with the filing of these documents. If a fee is deemed necessary, we authorize the Commissioner of Patents and Trademarks to charge Deposit Account No.: 02-0393.

Respectfully submitted,



Frank M. Gasparo
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New York, NY 10022
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Attachments

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Complete if Known

Application Number	09/682,363
Filing Date	8/24/2001
First Named Inventor	Anthony C. Zuppero
Art Unit	1753
Examiner Name	Alan D. Diamond
Attorney Docket Number	22122878-6

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U. S. PATENT DOCUMENTS

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INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary)	Attorney Docket Number 22122878-6	Application Number 09/682,363
	Applicants Anthony C. Zuppero et al.	
	Filing Date 8/24/2001	Group Art Unit 1753

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

	"Electron-hole pair creation by reactions at metal surfaces", downloaded from www.aps.org/meet/CENT99/BAPS/abs?S6980001.html American Physical Society Centennial Meeting Program, Atlanta, GA. 20-26 March 1999
	"Electron-Hole Pair Creation at Ag and Cu Surfaces by Adsorption of Atomic Hydrogen and Deuterium", Physical Review Letters, Volume 82, Number 2. 11 January 1999
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First Named Inventor	Anthony C. Zuppero
Art Unit	1753
Examiner Name	Alan D. Diamond
Attorney Docket Number	22122878-6

Sheet ☐ of ☐**OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS**

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	12
	2	HARRISON, P. et al., The Carrier Dynamics of Far-Infrared Intersubband Lasers and Tunable Emitters, Institute of Microwaves and Photonics, University of Leeds, U.K., pp. 1-64	
	3	WEBER, et al., to X2 Electron Transfer Times in Type-II GaAs/A1As Superlattices Due to Emission of Confined and Interface Phonons, Superlattices and Microstructures, Vol. 23, No. 2 (1998).	
	4	FANN, W.S. et al., Electron Thermalization in Gold, Physical Review B, Brief Reports, Vol. 46, No. 20, (1992)	
	5	Ultrafast Surface Dynamics Group, Time-Resolved Two-Photon Photoemission (TR-2PPE), http://www.llp.physik.uni-essen.de/aeschlimann/2y_photo.htm	
	6	LEWIS et al., Vibrational Dynamics of Molecular Overlayers on Metal Surfaces, Dept. of Chemistry, University of Pennsylvania, http://lorax.chem.upenn.edu/molsurf/cucotalk/html .	
	7	RETTNER et al., Dynamics of the Chemisorption of O2 on Pt(111): Dissociation via Direct Population of a Molecularly Chemisorbed Precursor at High Incidence Kinetic Energy, The Journal of Chemical Physics, Vol. 94, Issue 2 (1991)	
	8	FRIEDMAN et al., SiGe/Si THz Laser Based on Transitions Between Inverted Mass Light-Hole and Heavy Hole Standards, Applied Physics Letters, Vol. 78, No. 4 (2001)	
	9	HARRISON et al., Population -Inversion and Gain Estimates for a Semiconductor TASER	
	10	HARRISON et al., Theoretical Studies of Subband Carrier Lifetimes in an Optically Pumped Three-Level-Terahertz Laser, Superlattices and Microstructures, Vol. 23, No. 2 (1998)	
	11	HARRISON et al., Room Temperature Population Inversion in SiGe TASER Designs, IMP, School of Electronic and Electrical Engineering, The University of Leeds	
	12	SUN et al., Pheonon-Pumped Terahertz Gain in n-Type GaAs/AlGaAs Superlattices, Applied Physic Letters, Vol. 7; No.22 (2001)	

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	13	ALTUKHOV et al., Towards Si1-xGe Quantum-Well Resonant-State Terahertz Laser, Applied Physics Letters, Vol. 79, No. 24 (2001)	
	14	SUN et al., Intersubband Lasing Lifetimes of SiGe/Si and GaAs/AlGaAs Multiple Quantum Well Structures, Applied Physics Letters, Vol. 66, No. 25 (1995)	
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	17	AESCHLIMANN et al., Competing Nonradiative Channels for Hot Electron Induced Surface Photochemistry, Chemical Physics 202, 127-141 (1996)	
	18	AUERBACH, Daniel J., Hitting the Surface-Softly, Science, Vol. 294, pp. 2488-2489 (2001)	
	19	BADESCU et al., Energetics and Vibrational States for Hydrogen on Pt(111), Physical Review Letters, Vol. 88, No. 13 (2002)	
	20	BALANDIN et al., Effect of Phonon Confinement on the Thermoelectric Figure of Merit of Quantum Wells, Journal of Applied Physics, Vol. 84, No. 11 (1998)	
	21	BARTELS et al., Coherent Zone-Folded Longitudinal Acoustic Phonons in Semiconductor Superlattices: Excitation and Detection, Physical Review Letters, Vol. 82, No. 5 (1999)	
	22	BAUMBERG et al., Ultrafast Acoustic Phonon Ballistics in Semiconductor Heterostructures, Physical Review Letters, Vol. 78, No. 17 (1997)	
	23	BEDURFTIG et al., Vibrational and Structural Properties of OH Adsorbed on Pt(111), Journal of Chemical Physics, Vol. 111, No. 24 (1999)	

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		First Named Inventor	Anthony C. Zuppero
		Art Unit	1753
		Examiner Name	Alan D. Diamond
		Attorney Docket Number	22122878-6

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	24	VALDEN et al., Onset of Catalytic Activity of Gold Clusters on Titania with the Appearance of Nonmetallic Properties, Science, Vol. 281 (1998)	
	25	BONDZIE et al., Oxygen Adsorption on Well-Defined Gold Particles on TiO ₂ (110), J. Vac. Sci. Technol. A17(4) (1999)	
	26	BEZANT et al., Intersubband Relaxation Lifetimes in p-GaAs/AlGaAs Quantum Wells Below the LO-Phonon Energy Measured in a Free Electron Laser Experiment, Semicond. Sci. Technol. 14 (1999)	
	27	BRAKO et al., Interaction of CO Molecules Adsorbed on Metal Surfaces, Vacuum 61,89-93 (2001)	
	28	BURGI et al., Confinement of Surface State Electrons in Fabry-Perot Resonators, Physical Review Letters, Vol. 81, No. 24 (1998)	
	29	BURGI et al., Probing Hot-Electron Dynamics at Surfaces with a Cold Scanning Tunneling Microscope, Physical Review Letters, Vol. 82, No. 22 (1999)	
	30	CHANG, Y.M., Interaction of Electron and Hole Plasma with Coherent Longitudinal Optical Phonons in GaAs, Applied Physics Letter, Vol. 80, No. 14 (2002)	
	31	CHANG et al., Observation of Coherent Surface Optical Phonon Oscillations by Time-Resolved Surface Second-Harmonic Generation, Physical Review Letters, Vol. 78, No. 24 (1997)	
	32	CHANG et al., Coherent Phonon Spectroscopy of GaAs Surfaces Using Time-Resolved Second-Harmonic Generation, Chemical Physics 251, 283-308 (2000)	
	33	CHANG et al. Observation of Local-Interfacial Optical Phonons at Buried Interfaces Using Time-Resolved Second Harmonic Generation, Physical Review B, Vol. 59, No. 19 (1999)	
	34	CHEN et al., Stimulate-Emission-Induced Enhancement of the Decay Rate of Longitudinal Optical Phonons in III-V Semiconductors; Applied Physics Letters, Vol. 80, No. 16 (2002)	

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Sheet 1 of 1**OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS**

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	35	CORCELLI et al., Vibrational Energy Pooling in CO on NaCl(100): Methods, Journal of Chemical Physics, Vol. 116, No. 18 (2002)	
	36	FIERZ et al., Time-Resolved 2-Photon Photoionization on Metallic Nanoparticles, Appl. Phys. B 68 (1999); http://www.itp.physik.uni-essen.de/aeschlimann/abstractct.htm#6	
	37	BEZANT et al., Intersubband Relaxation Lifetimes in p-GaAs/AlGaAs Quantum Wells Below the LO-Phonon Energy Measured in a Free Electron Laser Experiment, Semicond. Sci. Technol., 14 No. 8 (1999)	
	38	BONDZIE et al., Oxygen Adsorption on Well-Defined Gold Particles on TiO ₂ (110), Journal of Vacuum Science & Technology A: Vacuum, Surfaces and Films, Vol. 17, Issue 4, pp. 1717-1720 (1999)	
	39	HARRISON et al., Maximising the Population Inversion, by Optimizing the Depopulation Rate, in Far-Infrared Quantum Cascade Lasers (2001)	
	40	HARRISON et al., The Carrier Dynamics of Terahertz Intersubband Lasers, Some Publishing Company (1999)	
	41	FANN et al., Electron Thermalization in Gold, Physical Review B, Vol. 46, No. 20 (1992)	
	42	CUMMINGS et al., Ultrafast Impulsive Excitation of Coherent Longitudinal Acoustic Phonon Oscillations in Highly Photoexcited InSb, Applied Physics Letters, Vol. 79, No. 6 (2001)	
	43	CHIANG, T.C., Photoemission Studies of Quantum Well States in Thin Films, Surface Science Reports 39, pp. 181-235 (2000)	
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	45	DAVIS et al., Kinetics and Dynamics of the Dissociative Chemisorption of Oxygen on Ir(111), J. Chem. Phys. 109 (3) (1997)	

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	46	CHOI et al., Ultrafast Carrier Dynamics in a Highly Excited GaN Epilayer, Physical Review B, Vol. 63, 115315 (2001)	
	47	DIEKHONER et al., Parallel Pathways in Methanol Decomposition on Pt(111), Surface Science 409, pp. 384-391 (1998)	
	48	DEMIDENKO et al., Piezoelectrically Active Acoustic Waves Confined in a Quantum Well and Their Amplification by electron Drift, Semiconductor Physics, Quantum Electronics & Optoelectronics, Vol. 3, No. 4, pp. 427-431 (2000)	
	49	de PAULA et al., to X2 Electron Transfer Times in Type-II Superlattices Due to Emission of Confined Phonons, Appl. Phys. Lett. 65 (10) (1994)	
	50	de PAULA et al., Carrier Capture via Confined Phonons in GaAs-AlGaAs Multiple Quantum Wells, Second. Sci. Technol. 9, pp. 730-732 (1994)	
	51	DEMIDENKO et al., Amplification of Localized Acoustic Waves by the Electron Drift in a Quantum Well, Semiconductor Physics, Quantum Electronics & Optoelectronics, Vol. 2, No. 1, pp. 11-24 (1999)	
	52	DEMIDENKO et al., Generation of Coherent Confined Acoustic Phonons by Drifting Electrons in Quantum Wire, Semiconductor Physics, Quantum Electronics & Optoelectronics, Vol. 3, No. 4, pp. 432-437 (2000)	
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Application Number	09/682,363
Filing Date	8/24/2001
First Named Inventor	Anthony C. Zuppero
Art Unit	1753
Examiner Name	Alan D. Diamond
Attorney Docket Number	22122878-6

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Attorney Docket Number	22122878-6

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	102	SMIT et al., Enhanced Tunneling Across Nanometer-Scale Metal-Semiconductor Interfaces, Applied Physics Letters, Vol. 80, No. 14 (2002)	
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Application Number	09/682,363
Filing Date	8/24/2001
First Named Inventor	Anthony C. Zuppero
Art Unit	1753
Examiner Name	Alan D. Diamond
Attorney Docket Number	22122878-6

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	145	RYH et al., Methanol Oxidation of Palladium Compared to Rhodium at Ambient Pressures as Probed by Surface-Enhanced Raman and Mass Spectroscopies, Journal of Catalysis, Vol. 174 (2) (1998)	
	146	GUMHALTER et al., Effect of Electronic Relaxation on Covalent Adsorption Reaction Rates, Physical Review B, Vol. 30, Issue 6 (1984)	
	147	NOLAN et al., Surface Science, Direct Verification of a High-Translational-Energy Molecular Precursor to Oxygen Dissociation on Pd(111), Surface Science, Vol. 419 (1998)	
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	150	DiMATTEO et al., Enhanced Photogeneration of Carriers in a Semiconductor Via Coupling Across a Nonisothermal Nonascale Vacuum Gap, Applied Physics Letters, Vol. 79, Issue 12 (2001)	
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U.S. PATENT DOCUMENTS

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Sheet 1 of 1

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		Number	Kind Code* (if known)			
	1	US- 4,590,507		05-20-1986	CAPASSO, et al.	
	2	US- 4,686,350		08-11-1987	CAPASSO, et al.	
	3	US- 4,849,799		07-18-1989	CAPASSO, et al.	
	4	US- 5,311,009		05-10-1994	CAPASSO, et al.	
	5	US- 6,084,173		07-04-2000	DIMATTEO	
	6	US- 6,232,546		05-15-2001	DIMATTEO, et al.	
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	7	AUERBACH, Daniel J.; "Hitting the Surface-Softly"; Science, 294, (2001), pp. 2488-2489	
	8	BONDZIE, V. A., et al.; "Oxygen adsorption ... gold particles ... TiO ₂ (110)"; J. Vac. Sci. Tech. A., (1999) 17, pp. 1717 and figure 3	
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	11	CHIANG, T.-C.; "Photoemission studies of quantum well states in thin films; Surf. Sci. Rpts.39 (2000) pp 181-235	
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Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>	Complete if Known Application Number 09/682,363 Filing Date 8/24/2001 First Named Inventor Anthony C. Zuppero Art Unit 1753 Examiner Name Alan D. Diamond Attorney Docket Number 22122878-6
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	16	DIEKHONER, L., et al.; "Parallel pathways in methanol... Pt(111)"; Surf. Sci. 409 (1998) pp 384-391	
	17	DIESING, D., et al.; "Aluminum oxide tunnel junctions..."; Thin Solid Films, Vol. 342 (1-2) (1999) pp. 282-290	
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	23	FAN, C. Y., et al.; "The oxidation of CO on RuO2 ..."; J. Chem. Phys. 114, (2001), pp. 10058-10062	
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	25	GBR, Adam T., et al.; "The dynamics of O2 adsorption on Pt(533)..."; J. Chem. Phys.(2000) 113, pp. 10333-10343	
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	34	HOHLFELD, J, et al.; "Electron and lattice dynamics ... optical excitation of metals"; Chemical Physics, 251 (2000) pp 237-258	
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	43	ISHIKAWA, Yasuyuki, et al.; "Energetics of H ₂ O dissociation and COads+OHads reaction .. Pt.."; Surf. Sci. preprints SUSC 12830, 27 April 2002	
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Application Number	09/682,363
Filing Date	8/24/2001
First Named Inventor	Anthony C. Zuppero
Art Unit	1753
Examiner Name	Alan D. Diamond
Attorney Docket Number	22122878-6

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**INFORMATION DISCLOSURE
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Complete If Known

Application Number	09/682,363
Filing Date	8/24/2001
First Named Inventor	Anthony C. Zuppero
Art Unit	1753
Examiner Name	Alan D. Diamond
Attorney Docket Number	22122878-6

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	36	P. ARMOUR et al., "Hot-electron transmission through metal-metal interfaces: a study of Au/Fe/Au trilayers in GaAs substrates", Applied Surface Science 123/124 (1998), Pages 412-417.	
	37	C.D. BEZANT et al., "Intersubband relaxation lifetimes in p-GaAs/AlGaAs quantum wells below the LO-phonon energy measured in a free electron laser experiment", Vacuum Solutions Online, Semicond. Sci. Technol. 14 No. 8 (August 1999) L25-L28, PI: S0268-1242(99)03669-X.	
	38	L. BURGI et al., "Confinement of Surface State Electrons in Fabry-Perot Resonators", Physical Review Letters, Volume 81, Number 24, 14 December 1998, Pages 5370-5373.	
	39	I. CAMPILLO et al., "Inelastic lifetimes of hot electrons in real metals", Physical Review Letters, Volume 83, Number 11, September 13, 1999, Pages 2230-2233.	
	40	CHIANG, T.-C., "Photoemission studies of quantum well states in thin films", Surface Science Reports 39 (2000) pp 181-235	
N	41	DE PAULA, A. et al, "Carrier capture processes in semiconductor superlattices due to emission of confined phonons", J. Appl. Phys. 77 (12), 1995 pp 6306-6312.	

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	2	REE, J. et al., "Reaction of atomic oxygen with adsorbed carbon monoxide on a platinum surface," Journal of Chemical Physics, Vol. 104, Issue 2, pp. 742 - 757, January 8, 1996.	
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	4	NOLAN, P. D. et al., "Translation Energy Selection of Molecular Precursors to Oxygen Adsorption on Pt (111)," Physical Review Letters, Vol. 81, No. 15, pp. 3179 - 3182, October 12, 1998.	
	5	MURPHY, M. J. et al., "Inverted vibrational distributions from N ₂ recombination at Ru(001): Evidence for a metastable molecular chemisorption well," Journal of Chemical Physics, Vol. 110, No. 14, pp. 6954 - 6962, April 8, 1999.	
	6	KIM, M. S. et al., "Reaction of Gas-Phase Atomic Hydrogen with Chemisorbed Hydrogen Atoms on an Iron Surface," Bull. Korean Chem. Soc., Vol. 18, No. 9, pp. 985 - 994, May 22, 1997.	
	7	BONN, M. et al., "Phonon-Versus Electron-Mediated Desorption and Oxidation of CO on Ru(0001)," Science, Vol. 285, pp. 1042 - 1045, August 13, 1999. www.sciencemag.org	

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	11	SHIN HK, "Vibrationally excited OD Radicals from the Reaction of Oxygen-Atoms with Chemisorbed Deuterium on TUNGSTEN," Journals of Physical Chemistry, Vol. 102(#13), pp. 2372 - 2380, March 26, 1998.	
	12	TRIPA, C. Emil et al., "Kinetics measurements of CO photo-oxidation on Pt(111)," Journal of Chemical Physics, Vol. 105, Issue 4, pp. 1691 - 1696, July 22, 1996.	

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	1.	FRESE, et al., "Analysis of Current/Voltage Curves at n-Si/SiO ₂ /Pt Electrodes", J. Electrochem. Soc., December 1994, pp. 3375-3382, Vol. 141, No. 12, The Electrochemical Society, Inc.	
	2.	FRESE, et al., "Methanol Oxidation at p-Si/Pt Electrodes, Evidence for Hot Hole Reactivity", J. Phys. Chem., 1995, pp. 6074-6083, Vol. 99, American Chemical Society.	
	3.	GADZUK, "Multiple Electron Processes in Hot-Electron Femtochemistry at Surfaces", http://www.csl.nist.gov/div837/837.03/highlite/gadzuk1999.htm .	
	4.	FRESE, et al., "Hot Electron Reduction at Etched n-Si/Pt Thin Film Electrodes", J. Electrochem. Soc., September 1994, pp.2402-2409, Vol. 103, The Electrochemical Society Inc.	
	5.	GAILLARD, et al., "Hot Electron Generation in Aqueous Solution at Oxide-Covered Tantalum Electrodes, Reduction of Methylpyridinium and Electrogenenerated Chemiluminescence of Ru(bpy) ₃ ²⁺ ", J. Phys. Chem., 1999, pp.667-674, Vol. 103, American Chemical Society.	
	6.	SUNG, et al., "Demonstration of Electrochemical Generation of Solution-Phase Hot Electrons at Oxide-Covered Tantalum Electrodes by Direct Electrogenenerated Chemiluminescence", J. Phys. Chem., 1998, pp. 9797-9805, Vol. 102, American Chemical Society.	
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	2	MAHAN, G. D. et al., "Multilayer thermionic refrigerator and generator," Journal of Applied Physics, Vol. 83, No. 9, 1 May 1998.	
	3	STIPE, B. C. et al., "Atomistic studies of O2 dissociation on Pt(111) induced by photons, electrons, and by heating," J. of Chem. Phys., Vol. 107 (16), October 22, 1997, pp. 6443 - 6447.	
	4	TRIPA, C. E. et al., "Surface-aligned reaction of photogenerated oxygen atoms with carbon monoxide targets," Nature, Vol. 398, 15 April 1999, pp. 591 - 593.	

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	3	GADZUK, J. W., "Hot-electron femtochemistry at surfaces: on the role of multiple electron processes in desorption," Chemical Physics, Vol. 251, year 2000, pp. 87-97.	
	4	GADZUK, J. W., "Resonance-assisted hot electron femtochemistry at surfaces," Physical Review Letters, May 27, 1996, Vol. 76, Issue 22, pp. 4234-4237.	
	5	GE, N.-H. et al., "Femtosecond Dynamics of Electron Localization at Interfaces," Science, Vol. 279, No. 5348, Issue of 9 Jan 1998, pp. 202-205.	
	6	GAO, Shiwu, "Quantum kinetic theory of vibrational heating and bond breaking by hot electrons," Physical Review B, Vol. 55, No. 3, 15 Jan 1997-I, pp. 1876-1886.	
	7	HOU, H. et al., "Enhanced Reactivity of Highly Vibrationally Excited Molecules on Metal Surfaces," Science, Vol. 284, No. 5420, Issue of 4 Jun 1999, pp. 1647-1650.	
	8	NIENHAUS, H. et al., "Direct detection of electron hole pairs generated by chemical reactions on metal surfaces," Surface Science 445 (2000) pp. 335-342.	
	9	NIENHAUS, H. et al., "Selective H atom sensors using ultrathin Ag/Si Schottky diodes," Applied Physics Letters, June 28, 1999, Vol. 74, Issue 26, pp. 4046-4048.	
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	11	ENGSTROM, Ulrika and RYBERG, Roger, "Comparing the vibrational properties of low-energy modes of a molecular and an atomic adsorbate: CO and O on Pt (111)," Journal Of Chemical Physics, Vol. 112, No. 4, 22 January 2000, pp. 1959-1965.	

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	14	OTTO, Andreas et al., "Role of atomic scale roughness in hot electron chemistry," Journal of Physical Chemistry B, Vol. 103, No. 14, April 8, 1999, pp. 2696-2701.	
	15	PLIHAL, M. et al., "Role of intra-adsorbate Coulomb correlations in energy transfer at metal surfaces," Physical Review B, Vol. 58, No. 4, July 15, 1998, pp. 2191-2206.	
	16	SUNG, Yung-Eun et al., "Enhancement of electrochemical hot electron injection into electrolyte solutions at oxide-covered tantalum electrodes by thin platinum films," Journal of Physical Chemistry B., Vol. 102, No. 49, December 3 1998, pp. 9806-11.	
	17	ZHDANOV, V. P. et al., "Substrate-mediated photoinduced chemical reactions on ultrathin metal films," Surface Science, Vol. 432 (#3), pp. L599-L603, July 20, 1999.	
	18	NIENHAUS, H., "Electron-hole pair creation by reactions at metal surfaces," American Physical Society, Centennial Meeting Program, March 20-26, 1999, Atlanta, GA, Session SC33 - Metal Surfaces: Adsorbates. http://www.aps.org/meet/CENT99/BAPS/	
	19	NIENHAUS, H et al., "Electron-Hole Pair Creation at Ag and Cu Surfaces by Adsorption of Atomic Hydrogen and Deuterium," Physical Review Letters, Vol. 82, Issue 2, January 11, 1999, pp. 446-449.	

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¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

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Complete if Known

Application Number	09/682,363
Filing Date	8/24/2001
First Named Inventor	Anthony C. Zuppero
Art Unit	1753
Examiner Name	Alan D. Diamond
Attorney Docket Number	22122878-6

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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

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U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A	US-6,537,829	03-2003	Zarling et al.	
	B	US-6,444,476	09-2002	Morgan, Christopher Grant	
	C	US-6,399,397	06-2002	Zarling et al.	
	E	US-6,312,914	11-2001	Kardos et al.	
	G	US-6,251,687	06-2001	Buechler et al.	
	H	US-6,238,931	05-2001	Buechler et al.	
	K	US-6,159,686	12-2000	Kardos et al.	
	M	US-5,891,656	04-1999	Zarling et al.	
		US-			

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		Number-Kind Code ² (if known)			
	A	US-2003/0207331	11-2003	Wilson et al.	
	B	US-2003/0166307	09-2003	Zuppero et al.	
	C	US-2003/0100119	05-2003	Weinberg et al.	
	D	US-2003/0030067	02-2003	Chen, Wei	
	E	US-2003/0019517	01-2003	McFarland, Erick W.	
	G	US-2002/0121088	09-2002	Zuppero et al.	
	H	US-2002/0070632	06-2002	Zuppero et al.	
	I	US-2002/0045190	04-2002	Wilson et al.	
	J	US-2002/0017827	02-2002	Zuppero et al.	
		US-6,700,056	03-2004	Zuppero et al.	
	IA	US-6,649,823	11-2003	Zuppero et al.	
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	A	US-5,763,189	06-1998	Buechler et al.	
	B	US-5,736,410	04-1998	Zarling et al.	
	C	US-5,698,397	12-1997	Zarling et al.	
	D	US-5,674,698	10-1997	Zarling et al.	
	E	US-5,632,870	05-1997	Kucherov, Yan R.	
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		WO 01/28677A1	04-2001	Zuppero et al.	
		JP-02157012A	06-1990		

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